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XXVIII. *Observations on the Lagopus, or Ptarmigan; in a Letter from the Hon. Daines Barrington, V. P. R. S. to Mathew Maty, M. D. F. R. S.*

DEAR SIR,

THE many different specimens of Lagopi, both in their winter and summer plumage, which have lately been presented to the Royal Society, from Hudson's Bay, enable us to correct many mistakes that have hitherto been made in the description of this bird; as well as the unnecessarily multiplying the species of the Tetrao genus.

As that able and ingenious naturalist, M. de Buffon, is the last ornithologist who hath made any observations on this bird, it may not be improper to take notice of some of his supposed inaccuracies.

The Lagopus, of which M. de Buffon gives an engraving, is in its winter plumage; and the feet of the bird are consequently covered very thick with feathers. M. de Buffon, however, from not having examined the specimens of the Lagopus with proper attention, says, that Aristotle could not have been acquainted with this bird, because the under parts of the claws are entirely covered with feathers; which circumstance is so very striking and peculiar, that it could not have escaped this father of natural history.

If a winter specimen, however, of the Lagopus, or Ptarmigan, is accurately examined, it will be found,

found, that no feathers grow precisely under the claws; though, by wrapping very thickly round them, they have very strongly that appearance: and, in a summer specimen, not only the feet, but even the legs, are rather bare of plumage. If Aristotle, therefore, had procured the bird in its summer dress, he could not have observed this very striking circumstance, which M. de Buffon relies upon as so strongly characteristic.

The same difference between the plumage in summer and winter is experienced in each of the three species of Tetrao, which have (according to one of Linnæus's subdivisions) feathered feet; and it is usually said with us, that they have in winter their snow-boots. M. de Buffon, therefore, unjustly charges the author of the British Zoology for supposing, that this is a wise provision of Nature against the inclemency of the season, when he says, [a] that the vrogallus Minor, or our Black Cock, hath not the same protection for its feet, though it buries itself under the snow, and, becoming torpid, equally wants such additional warmth.

With regard to the torpidity of this bird, M. de Buffon relies upon Linnæus's asserting, that *sæpe sepelitur in nive* [b]; which by no means signifies that the bird is torpid, but only that it buries itself, sometimes, under the snow; as sheep do with us in the more rigorous seasons, when it lies very deep in the mountains.

[a] T. ii. p. 216.

[b] Linn. S. Nat. p. 159. This circumstance is also observed by Pontoppidan, Pt. ii, p. 75. Engl. Transl.

The Black Cock, however, is so far from being torpid in the winter, that it even approaches the habitation of man when distressed for food; and I shall likewise conclude, till I see a specimen which proves the contrary, that, like the other Tetraos, whose feet are covered low with feathers, this part of the plumage becomes thicker in winter.

M. de Buffon also seems to be mistaken in supposing, that the thick plumage round the feet is peculiar to the Lagopus; as it is believed, that Linnæus's first division of this genus have all of them the same additional cloathing for the winter; nor is this extraordinary warmth confined merely to this genus, as the noble specimen of the large White Owl, which hath lately been presented to the Royal Society from Hudson's Bay, is covered about the claws with a plumage of perhaps an equal thickness.

The next remarkable circumstance in this bird is, that the shafts of many of the wing-feathers are black; which M. de Buffon supposes to be only six; whereas they are eight in the specimens from Hudson's Bay; the two last are, indeed, of a fainter colour.

M. de Buffon next says [c], that Brisson counts eighteen feathers in the tail; and Willoughby, sixteen; which he reduces himself to fourteen. It seems to me, however, that Willoughby's number is the more accurate; and, by examining the difference between the summer and winter specimens, I find that the black feathers of the tail are covered by two upper ones, which in summer are brown, and in winter white.

[c] T. ii. p. 264.

I cannot

I cannot also discover, in any of the specimens, the two white feathers in the tail, according to Linnæus's description, *rectricibus nigris apice albis, intermediis albis*, as the two covering feathers before-mentioned cannot, with propriety, be termed *intermedii*; nor are they white in the summer, but brown: so that Linnæus makes a circumstance, which varies with the season, to be a permanent characteristic of the bird.

M. de Buffon next supposes [*d*], that Willoughby and Frisch speak of different birds under the name of Lagopus; because the first says, that the feet are covered with soft, and the latter, with harsh and bristly feathers. The remarks, however, of these ornithologists, are easily reconciled; for, if the finger is drawn according to the course of the feathers, they feel soft; and, if in the contrary direction, harsh and bristly. The difference also between Belon, Gesner, and Linnæus, with regard to the call of this bird, is as easily accounted for; because most male birds differ from the female in this respect, and sometimes the young birds from those which are full-grown.

This naturally brings me to shew, that M. de Buffon (who hath great merit in other parts of his Natural History, by not unnecessarily multiplying the species of animals,) hath, in this kind of Tetrao, considered as two species what, when properly examined, will turn out to be only the Lagopus, or Ptarmigan.

His chief reason for considering the Lagopus of Hudson's Bay, as being distinct from the Ptarmi-

[*d*] T. ii. p. 271.

gan, arises from his asserting, that Mr. Edwards, in his description of that bird, says, that it is twice as large. Mr. Edwards, however, only considers the size of the Hudson's Bay Lagopus as between that of a Pheasant and a Partridge; in which he is very accurate: the bird is not only evidently so to the eye, but weighs three ounces more than a common Partridge [e].

M. de Buffon likewise seems to make an unnecessary species of Tetrao, under the name of *le petit Tetras, à plumage variable*; as his principal argument for this opinion is, that they are not found on the mountains, as the Lagopi are.

Now, it is very clear, from the name given in the catalogue from Hudson's Bay to this bird, of the *Willow Partridge*, that it lives entirely in that part of the world on the plains; nor are there (it is believed) any very high mountains in the neighbourhood of our forts.

When M. de Buffon, therefore, conceives, that the Lagopus is always endeavouring to find out snow and ice, and that it carefully avoids the glare of the sun [f]; it should seem, that the observation is by no means generally true; because, though the rigour of a Hudson's Bay winter is great, yet the summer is very pleasant, and the snow soon disappears, without which M. de Buffon imagines that the bird cannot exist; though his ninth plate represents the Ptarmigan, in his winter dress, fur-

[e] The Partridge, when full-grown, weighs thirteen ounces, and the Ptarmigan, sixteen.

[f] T. ii. p. 272.

rounded with trees and plants in most luxuriant foliage and vegetation.

I cannot agree, moreover, with M. de Buffon, when he says, that the flesh of the *Lagopus* is bitter; as I have eat them myself in the Highlands of Scotland; nor should I have been able to distinguish the taste from that of the common Grouse, which is well known to be a bird of most excellent flavour.

What I have hitherto remarked is chiefly in answer to that ingenious naturalist, M. de Buffon, who is the last ornithologist that hath both described and engraved this bird. I have only one new observation to make myself; which is, that the claws are scooped off at the end exactly like a writing-pen (wanting indeed the slit); which circumstance may likewise be seen in the claws of our common Grouse, or Heath-game, though the resemblance is not quite so strong as in the Ptarmigan.

I shall now conclude with copying, from the catalogue transmitted with the specimens from Hudson's Bay, what further relates to the *Lagopus*; which, as I observed before, is there called a Willow-partridge [g].

“ The Willow-partridges gather together in large
“ flocks in the beginning of October, harbouring
“ amongst the willows, the tops of which are their
“ principal food; they then change to their winter

[g] It is not at all extraordinary, that it should there be considered as a Partridge; because the White Partridge is the name given to this bird by the old ornithologists, who have very naturally considered edible birds nearly of the same size, as Partridges when they have short tails, and as Pheasants, when they have long ones.

“ drefs. They change again in March, and have
 “ their complete fummer drefs by the latter end of
 “ June. They make their neft in the ground in
 “ dry ridges; and are fo plentiful, that ten thou-
 “ fand have been killed in the three forts in one
 “ winter.”

I am, dear S I R,

Your moft faithful,

humble Servant,

Daines Barrington.